

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 February 2006 (16.02.2006)

PCT

(10) International Publication Number
WO 2006/017197 A1

(51) International Patent Classification⁷: **B05D 7/16, 7/00**

(21) International Application Number:
PCT/US2005/024387

(22) International Filing Date: 8 July 2005 (08.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/889,571 12 July 2004 (12.07.2004) US

(71) Applicant (for all designated States except US): **E.I. DUPONT DE NEMOURS AND COMPANY [US/US]**;
1007 Market Street, Wilmington, DE 19898 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHILLA, Marc** [DE/DE]; Langenbruchstrasse 64, 45549 Sprockhoevel (DE). **GEORGIADIS, Michael** [GR/DE]; Jesinghausen 3a, 42389 Wuppertal (DE). **KEGEL, Volker** [DE/DE]; Loehrerlen 5, 42279 Wuppertal (DE). **RICHTER, Gunter** [DE/DE]; Wilhelm Blockhaus Weg 70, 42327 Wuppertal (DE).

(74) Agent: **BENJAMIN, Steven, C.**; E.I. Du Pont de Nemours and Company, Legal Patent Records Center, 4417 Lancaster Pike, Wilmington, DE 19805 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR THE PRODUCTION OF MULTI-LAYER COATINGS

(57) Abstract: A process for the production of special effect multi-layer coatings, comprising the successive steps: (1) applying a 10 to 30 μm thick base coat layer onto a substrate provided with an EDC primer, (2) applying a clear coat layer onto the base coat layer, (3) jointly curing the base coat and clear coat layers, wherein the base coat layer is applied in a first layer and in a second layer, the first layer comprises a modified water-borne base coat produced by mixing an unmodified water-borne base coat with an admixture component and the second layer comprises the unmodified water-borne base coat, wherein the unmodified water-borne base coat has a ratio by weight of pigment content to resin solids content of 0.05:1 to 0.6:1 and wherein the pigment content of the unmodified water-borne base coat comprises at least one metal flake pigment having a thickness of 10 to 100 nm corresponding to a proportion of 0.1 to 5 wt.%, relative to the resin solids content of the unmodified water-borne base coat and at least one additional special effect pigment and wherein the composition of the pigment content is such that the UV light transmission through the base coat layer formed of the first and second layers is less than 0.1 % in the wavelength range of from 290 to 380 nm and less than 0.5 % in the wavelength range of from 380 to 400 nm.

WO 2006/017197 A1